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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,482	10/21/2003	Ivan I. Aksenov	AFD 639	2529
26902	7590	07/20/2005		
DEPARTMENT OF THE AIR FORCE AFMC LO/JAZ 2240 B ST., RM. 100 WRIGHT-PATTERSON AFB, OH 45433-7109				
			EXAMINER VERSTEEG, STEVEN H	
			ART UNIT 1753	PAPER NUMBER

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/693,482

Applicant(s)

AKSENOV ET AL.

Examiner

Steven H. VerSteeg

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 and 24-31 is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/21/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **13'** and **21** (see Figure 1); **13(a)** (see Figure 9B); and **3'** (see Figures 9C and 10). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 16-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claim 16, the phrase "saddle-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "saddle-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d). I suggest amending "saddle-like" to be "saddle shaped" to overcome the rejection.

6. Claims 17-23 depend from claim 16 and contain all of the limitations of claim 16. Therefore, claims 17-23 are rejected for the same reasons as claim 16.

***Allowable Subject Matter***

7. Claims 1-15 and 24-31 are allowed.

8. Claim 16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

9. Claims 17-23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: it is neither anticipated nor obvious over the prior art of record to have a filtered cathodic-arc plasma source as claimed by Applicant in claim 1; or a method of generating filtered high quality cathodic-arc plasma as claimed by Applicant in claim 12; or a purified cathodic arc plasma generator as claimed by Applicant in claims 16 and 24.

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11. US 2002/0139662 A1 to Lee discloses a cathodic arc system in which a substrate **104** is at a right angle from the target **92** (see Figure 3), but the path is a curved path, not a right angle path [0025].

12. US 5,840,163 to Welty discloses a rectangular duct in which the substrate **44** is at a right angle to the target **30**, but the path is not a right angled or orthogonal path (see Figure 2). Also, there is at most a single magnet at or adjacent to the angled portion.

13. US 5,435,900 to Gorokhovskiy discloses a right-angled cathodic arc apparatus, but there is only a single magnet at the right angle. There is no motivation to utilize a second magnet.

14. There is no motivation to combined Lee, Welty, and Gorokhovskiy, and even if motivation existed, the combination would not teach all of Applicant's limitations.

#### ***Information Disclosure Statement***

15. Applicant filed a supplemental disclosure statement on August 2, 2004, but did not file a corresponding PTO-1449. Applicant merely listed a single US reference for consideration in the middle of a paper. I have written that patent number on the PTO-1449 that you filed October 21, 2003. Please be advised that you need to use the proper form in the future.

#### ***General Information***

For general status inquiries on applications not having received a first action on the merits, please contact the Technology Center 1700 receptionist at (571) 272-1700.

For inquiries involving Recovery of lost papers & cases, sending out missing papers, resetting shortened statutory periods, or for restarting the shortened statutory period for response, please contact Denis Boyd at (571) 272-0992.

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For general inquiries such as fees, hours of operation, and employee location, please contact the Technology Center 1700 receptionist at (571) 272-1300.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. VerSteeg whose telephone number is (571) 272-1348. The examiner can normally be reached on Mon - Thurs (6:30 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Steven H VerSteeg  
Primary Examiner  
Art Unit 1753

shv  
July 18, 2005